XEROX®

Technology | Document Management | Consulting Services

Evaluator
Guide

CopyCentre® C20

WorkCentre® M20

WorkCentre® M20i

ABOUT THIS GUIDE

This guide will introduce you to the CopyCentre C20 digital copier, WorkCentre M20 and WorkCentre M20i copier-printers and aid you in your evaluation process.

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Section 2 – – Evaluating Desktop Multifunction devices

Suggests specific features to look for in a product of this class, how to evaluate those features, and how the Xerox WorkCentre M20 family of products measures up.

Section 3 – Configurations, Specifications, Options and Supplies

This guide was printed entirely on a Xerox Phaser Color Laser Printer.

Product Overview

PRODUCT OVERVIEW

The CopyCentre C20 digital copier, WorkCentre M20 and WorkCentre M20i copier-printers are cost effective monochrome desktop multifunction systems. They have been designed to meet the small office and work-group office requirements for copying, printing, faxing, scanning, and email.

The CopyCentre C20/WorkCentre M20/WorkCentre M20i advances this segment of the market to the next level by offering a letter/legal device with exceptional features and functionality.

The CopyCentre C20/WorkCentre M20/WorkCentre M20i provides:

Extremely Simple operation

- Intelligent design – intuitive user interface and simple print drivers

- Easy-to-use features – Copy/Print/Fax/Scan/Email

- Remote device management from the desktop

Extra Smart features

- Embedded Network Interface Card – provides for a smart network connection

- Automatically Feeds from multiple trays

- Automatic scan once/print many with collated sets

- Powerful security features including Secure Fax, Secure Printing capabilities and Network Authentication

- Push-Button Simple Scan-to-Email from address lists with LDAP capability

Excellent Performance

- Fast desktop speed at 22 pages per minute (Letter), 21 pages per minute (A4)

- Automatic two-sided printing in both Copy & Print Modes

- Fast color faxing at 33.6Kbps with state of the art compression technology (JBIG)

Configurations and Options

There are three standard configurations

CopyCentre C20

Copy Only

Standard Configuration Includes:
- 22 ppm Letter / 21 ppm A4
- First Copy Out Time < 8 sec.
- One 550-sheet paper tray
- One 100-sheet bypass tray
- 250-sheet output tray
- 50-sheet DADF is standard

Optional Accessories include:
- 2nd Paper Tray – 550 sheets
- Foreign Device Interface Kit to provide connectivity to external third party control devices (e.g. vend stations, and accounting terminals)
- Cabinet Stand

WorkCentre M20

Copy/Print/Scan

Standard Configuration Includes:
- 22 ppm Letter / 21 ppm A4
- First Copy Out Time < 8 sec.
- First Print Out Time < 9 sec.
- One 550-sheet paper tray
- One 100-sheet bypass tray
- 250-sheet output tray
- 50-sheet DADF is standard
- Direct connect printing (PCL 6 Driver)
- Direct connect scanning (TWAIN Driver)
- Scansoft PaperPort SE v9.0 and OmniPage SE v2.0 software (1 user license)

Optional Accessories include:
- Network Accessory Kit: Provides Ethernet network interface card, Adds Postscript 3 printing support, 32MB memory for e-mail support, E-mail keyboard, Documentation, Software CD and Solutions CD (web management tools)
- 2nd Paper Tray – 550 sheets
- Secure Print and Network Authentication Kit: adds 96 MB memory, secure print drivers, applicable software and documentation (requires Network Accessory kit)
- Foreign Device Interface Kit to provide connectivity to external third party control devices (e.g. vend stations, and accounting terminals)
- Cabinet Stand

WorkCentre M20i

Copy/Print/Scan/Fax/Email

Standard Configuration Includes:
- 22 ppm Letter / 21 ppm A4
- First Copy Out Time < 8 sec.
- First Print Out Time < 9 sec.
- One 550-sheet paper tray
- One 100-sheet bypass tray
- 250-sheet output tray
- 50-sheet DADF is standard
- Direct connect printing (PCL 6 Driver)
- Integrated network connectivity – 10Base T connectivity port embedded in machine
- Postscript 3 standard
- Integrated Ethernet network interface; Postscript 3 driver; and Solutions CD (web management tools)
- CentreWare device management capability including CentreWare Web, CentreWare Internet Services, CentreWare DP, Novell NDPS, and HP HPOpenview
- Fax-33.6Kbps modem with JBIG* compression on the M20i
- Superior fax features including mailboxes, forwarding features to an email address or another fax number
- Scan-to-email with LDAP** capabilities
- Direct connect scanning (TWAIN Driver)
- Scansoft PaperPort SE v9.0 and OmniPage SE v2.0 software (1 user license)

Optional Accessories include:
- 2nd Paper Tray – 550 sheets
- Secure Print and Network Authentication Kit: adds 96 MB memory, secure print drivers, applicable software and documentation
- Foreign Device Interface Kit to provide connectivity to external third party control devices (e.g. vend stations, and accounting terminals)
- Cabinet Stand

Exceptional features available for the first time at this price:
- Increased Speed - 22ppm (letter), 21 ppm (A4)
- Full Duplex - two-sided input & output capability (Copy and Print) standard

*JBIG = "Joint Bi-level Image experts Group" is a new compression standard which provides an improvement of 20 to 80% over previous compression techniques.

**LDAP = "Lightweight Directory Application Protocol" applies to company/corporate internal email address lists. It is a standard protocol utilized within most company /corporate email servers. LDAP provides for searching of company/corporate network email address information from mail servers to make it easier to find email addresses from corporate address books without requiring end users to have to enter "full" addresses via keyboard entry.

Evaluating Desktop Multifunction devices

EVALUATION CRITERIA

As the company that invented laser printing, Ethernet networking, and the first digital MFP, Xerox has invested years of research and development in designing the most productive office devices in the industry. This experience has positioned Xerox as the recognized leader in office MFP design and performance. Based on our in-depth understanding of customer needs in the office, Xerox recommends the following criteria be considered in the evaluation process of a shared desktop MFP:

- **How easy is it to use?**
  Some MFPs can be confusing with an inconsistent interface between functions.

- **Was it designed with your needs in mind?**

- **Can the performance match your needs?**

Most MFPs look the same from the outside. And from a quick look at specifications on speeds, feeds, and print resolution, you might incorrectly conclude that most MFPs are basically equal. This section of the Evaluator Guide will suggest ways you can thoroughly evaluate them, and show how the Xerox CopyCentre C20 and WorkCentre M20/M20i models can meet your needs.

EVALUATE | **EVALUATE EASE OF USE**

Consider such things as **walk-up convenience**. Is the device sized to be conveniently located for the entire workgroup? Is the user interface **simple to understand and consistent** from one major feature to the next? Are the **drivers easy to install** and intuitive to use? Can features be used at the same time or are users forced to wait for the device to be "free"? Can you monitor the device functions from your desktop? Are the scanning and faxing features **powerful enough** for your busy workgroup?

ADVANTAGE XEROX | **HOW THE XEROX COPYCENTRE C20/WORKCENTRE M20/M20i EXCEEDS THE EASE OF USE REQUIREMENT**

The front panel is not cluttered with lots of buttons, just the ones you need. Select the desired function and the intuitive user interface provides the advanced feature options for that function. An alpha-numeric keypad is provided for fast and easy email addressing. There is even a ".com/ .net / .org" button to save time and reduce keystrokes.

Intuitive operation doesn't stop at the front panel. Print driver options are clearly laid out and simple to select.

M20i front panel

The copy/print models, M20/M20i, are very easy to manage and fit within the IT infrastructure. They include an embedded network interface connection (optional on M20), plus a robust suite of tools to manage the device remotely over the network.

The ControlCentre tool is available for USB direct connected configurations and provides access to the device through a PC interface to manage paper trays, obtain meter information, setup fax capabilities, and upgrade firmware.

CentreWare® Internet Services is the machine's embedded web server and can be viewed on any PC with a web browser which is on the same TCP/IP network as the machine. It allows administrators to change machine settings and view printer status including paper tray settings, and consumables such as toner and drum cartridge.

CentreWare® Web installs, configures, manages, monitors and reports on networked printers regardless of the manufacturer. It detects machines over the network that support the SNMP protocol and provides printer management via a web browser.

Network Authentication to control access to network features. Leveraging SMB or Kerberos to maximize IT efficiency.

Other device management tools available include support for Novell's NDPS or Distributed Print Services and HP's OpenView.

EVALUATE **EVALUATE SMART DESIGN**

Are you looking at a **fully integrated device** where all the functions work together to create more value than the sum of their parts? Or is it simply multiple products sharing a common platform? Do the network features give you **full access to the power of your network**? Does the device include **additional software** to take full advantage of your digital documents?

ADVANTAGE XEROX **HOW THE XEROX COPYCENTRE C20/WORKCENTRE M20/M20i EXCEEDS THE SMART DESIGN REQUIREMENT**

- Intelligent design and a thoughtful feature set reduce the amount of time and attention required for basic office tasks. The digital design will scan once/print many, enabling easy document collation all in one step.

- Multiple paper trays provide maximum flexibility for individual tasks and for multiple users – all with minimum user intervention. And with easy to adjust tray sizes and auto tray selection, you'll print on the right media every time.

- Internet connectivity provides printing capability from your network or anywhere in the world. Scan to email is a powerful yet simple feature that is as easy as faxing, yet avoids the phone charges. Scanned documents are sent quickly and easily over the network to any email addresses you choose.

- The M20i also offers a scan-to-self feature, which can automatically send a copy of the scanned file to the sender.

- OmniPage SE v2.0 software converts paper and .pdf files into editable electronic documents. PaperPort SE v9.0 allows you to automatically create .pdf, .TIFF, or .JPG (color) files from scanned documents. Both software tools eliminate numerous steps for organizing, sharing, and storing documents.

- Secure Fax is a feature that protects documents containing sensitive information. Authorized recipients simply enter a secure password to print the transmitted document.

Consider **print speed**. Is the raw print speed sufficient to keep up with your busy workgroup? Match that with the first-print-out-time and you'll have an indication of **real throughput**, especially on average office print jobs, which are just 3 to 5 pages in length. Speaking of speed, compare **fax transmission speed** to determine which is the real office workhorse. Is **two-sided printing** (duplexing) standard, or even an option? Is the input for **optional media** sized for real world sized jobs or do you need to feed media a single piece at a time? Is the **total input capacity** adequate for your workgroup needs? Is **automatic electronic collation** available to save you valuable time?

ADVANTAGE XEROX | **HOW THE XEROX COPYCENTRE C20/WORKCENTRE M20/M20i EXCEEDS THE PERFORMANCE REQUIREMENT**

- At 22 ppm (letter), 21 ppm (A4), the C20/M20/M20i speeds all tasks to completion.

- The ultra-fast 33.6Kbps fax transmission speed combined with 16MB of fax memory provide exceptional fax performance.

- Automatic two-sided printing and copying saves paper and produces more professional looking documents.

- The 100-sheet bypass tray for envelopes, transparencies or special media means even special jobs are completed swiftly.

- An optional second paper tray boosts the total paper capacity to 1200-sheets.

- Automatic electronic collation saves time by eliminating manual sorting.

- And in Dual mode you're able to fax and copy or print at the same time.

- ID Card Copy allows both sides of an identification document such as a driver's license or insurance card to be copied to a single side of the copy.

- Several other time saving features include: n-up printing, cover pages, transparency interleaf, booklet printing and book copy.

- Optional Secure Print to control document level access

SECTION 3

Configurations, Specifications, Options and Supplies

COMPETITIVE COMPARISON

	XEROX M20i	HP LASERJET 4101	LEXMARK x422
Street Price	$1,999	$2,499	$1,479
Platen Size	Legal	Letter	Legal
Print/Copy Speed	22 ppm	25 ppm	22 ppm
Mono Scan Speed	22 ppm	25 Ltr/24 A4	16 ppm
FCOT	8 seconds	12 seconds	<10 seconds
ADF	50-sheet DADF	30-sheet	50-sheet
Full Duplex	Yes	No, print only	no, print only
NW Scan to PC	No	Yes	Yes

Scan to Email
  – Ad Hoc
  – LDAP
  – Authentication
	Yes
	Yes
	Yes
	Yes
		Yes
		Yes
		Yes
		Yes
			No

Fax Type	33.6/JBIG	14.4/MR	33.6/No JBIG
PDLs	PCL 6, PS3	PCL6 PS3	PCL 6, PS3
Print Resolution	1200 x 1200 (int)	1200 x 1200	1200 x 1200
Color scan capable	up to 4800 dpi	600 x 600	600 x 600
Scanning software	Omnipage SE v2.0 PaperPort SE v9.0	No No	No Yes
Document feeder	50-sheet fully automatic including duplexing	30-sheet manual duplex	50-sheet manual duplex
Foreign Device Interface Auditron	Yes	No	No
Secure Fax	Yes	No	No
Device Management Tools	CentreWare (CW) Internet Services (IS) CW Web CW DP Novell NDPS HP OpenView ControlCentre 5.0	HP JetAdmin HP OpenView	Web browser access to embedded web server

CONFIGURATION SUMMARY

There are three configuration offerings: CopyCentre C20 is a digital copier model. WorkCentre M20 is a digital copier/printer model and the WorkCentre M20i is a full multifunction product with copy/print/fax/scan/email capabilities

FEATURE	COPYCENTRE C20	WORKCENTRE M20	WORKCENTRE M20i
COPYING			
Copy speed	22 ppm letter/21 ppm A4	22 ppm letter/21 ppm A4	22 ppm letter/21 ppm A4
First copy out time	< 8 seconds	< 8 seconds	< 8 seconds
Resolution	600 x 600 dpi	600 x 600 dpi	600 x 600 dpi
Two-sided copy	Digital Automatic Document Feeder (DADF) (1-2, 2-2, 2-1)	Digital Automatic Document Feeder (DADF) (1-2, 2-2, 2-1)	Digital Automatic Document Feeder (DADF) (1-2, 2-2, 2-1)
Reduce/Enlarge	Platen or DADF 25-400% in 1% increments	Platen or DADF 25-400% in 1% increments	Platen or DADF 25-400% in 1% increments
Productivity	Scan Once Print Many, Electronic Pre-Collation	Scan Once Print Many, Electronic Pre-Collation	Scan Once Print Many, Electronic Pre-Collation
Multiple copies	Up to 999 copies of multi-page originals	Up to 999 copies of multi-page originals	Up to 999 copies of multi-page originals
Paper handling	Standard: one 550-sheet tray, one 100-sheet bypass tray, 250-sheet output tray. Optional: 2nd 550-sheet tray	Standard: one 550-sheet tray, one 100-sheet bypass tray, 250-sheet output tray. Optional: 2nd 550-sheet tray	Standard: one 550-sheet tray, one 100-sheet bypass tray, 250-sheet output tray. Optional: 2nd 550-sheet tray
PRINTING			
Print Speed		22 ppm letter/21 ppm A4	22 ppm letter/21 ppm A4
First print out time		< 9 seconds	< 9 seconds
Resolution		600 x 600 dpi, 1200 x 1200 dpi (interpolated)	600 x 600 dpi, 1200 x 1200 dpi (interpolated)
Two-sided printing (duplex)		Standard	Standard
Secure Print*		Optional	Optional
Page Description Language (PDL)		Standard: PCL6 Optional: PostScript 3 included with the Network Accessory Kit	Standard: PCL6 and PostScript 3
Print Drivers		Windows 98/NT4.0/2000/ME/XP, Mac OS 10.0	Windows 98/NT4.0/2000/ME/XP, Mac OS 10.0
Interfaces		Standard: USB 2.0 Optional: 10/100BaseT Ethernet included with the Network Accessory kit	Standard: USB 2.0 10/100BaseT Ethernet
SCAN			
Compatibility		TWAIN standard	TWAIN standard
Technology		Direct Connect to PC (USB); Parallel Port IEEE 1284	Direct Connect to PC (USB); Parallel Port IEEE 1284
Scan Resolution: Optical resolution: Interpolated resolution: Pre-scan		600 x 0600 dpi 4800 dpi yes, 75 dpi	600 x 0600 dpi 4800 dpi yes, 75 dpi
Depth: Monochrome: Grayscale: Color: Scan Driver: Bundled OCR Software:		1 bit 20 bit 60 bit TWAIN standard PaperPort SE v9.0 and OmniPage SE v2.0	1 bit 20 bit 60 bit TWAIN standard PaperPort SE v9.0 and OmniPage SE v2.0

CONFIGURATION SUMMARY (continued)

FEATURE	COPYCENTRE C20	WORKCENTRE M20	WORKCENTRE M20i
FAX Transmission Speed			3 seconds per page
Communication Mode			Half Duplex
Modem speed			33.6 Kbps
Data compression			JBIG, MMR/MR/MH (JPEG for color fax transmission)
Resolution			Pre-sets up to 400 x 400
Fax Memory			16 MB
Secure Fax			Receive Mode; Mailbox
Special Features			Delay, Batch, Toll Save
Dialing			Speed Dials up to 200 Group Dials up to 199
Halftones			256 levels
Color Fax Tx/Rec			Yes/No
Battery Backup			Up to 100 hours when fully charged
EMAIL Scan to SMTP addresses		Included with the optional Network Accessory Kit	Standard On The M20i
Local user access and authentication			
Device network access and authentication			
Guest mode access available			
Network address list search via LDAP			
NETWORK AUTHENTICATION* (SMB or Kerberos)		Included with optional Secure Print and Network Authentication Kit	

*optional Network Accessory kit required

PRODUCT SPECIFICATIONS

COPYING

Speed:	22 copies per min. (letter)
	21 copies per min. (A4)
Resolution:	600 x 600 dpi
First Copy Out:	< 8 seconds
Full Duplex:	Yes (1-2, 2-2, 2-1)
Reduce/Enlarge:	Platen: 25-400% in 1% increments
	DADF: 25-100% in 1% increments
Productivity:	Scan Once Print Many,
	Electronic Pre-Collation standard
Multiple Copies:	Up to 999 copies of multiple page originals

PRINTING

Technology:	Laser Monochrome
Speed:	22ppm (Letter), 21 ppm (A4)
First Print Out Time:	< 9 seconds
Resolution:	600 x 600 true dpi
	1200 x 1200 dpi (interpolated)
2-Sided:	Yes
Secure Print:	Optional
Page Description Language (PDL):	PCL6 Standard; PostScript 3 (Network Configurations)
Print Drivers:	Windows 98/NT4.0/2000/ME/XP,
	MAC OS 10.0
Interfaces:	USB v2.0 Standard on M20 and M20i
	(USB cable included); 10/100baseT
	Ethernet Standard on M20i, Optional on M20

SCAN

Compatibility:	TWAIN standard
Technology:	Direct Connect to PC (USB);
	Parallel Port IEEE1284
Scan Resolution:	Optical Resolution: 600 x 600 dpi
	Interpolated Resolution: 4800 dpi
	Pre-scan: Yes, 75 dpi
Depth:	Monochrome: 1 bit
	Grayscale: 20 bit
	Color: 60 bit
	Scan Driver: TWAIN Standard
Bundled OCR Software:	PaperPort SE v9.0,
	OmniPage SE v2.0

FAX

Transmission Speed:	3 seconds per page
Communication Mode:	Half Duplex
Modem Speed:	33.6 Kbps
Data Compression:	JBIG, MMR/MR/MH
	(JPEG for color fax transmission)
Resolution:	pre-sets up to 400 x 400 dpi
Fax Memory:	16 MB
Secure Fax:	Receive Mode; Mailbox
Special Features:	Delay, Batch, Polling, Toll Save
Dialing:	Speed Dials Up to 200 locations
	Group Dials Up to 199 supported
Halftones:	256 levels
Color Fax Tx/Rec:	Yes/No
Battery Backup:	Up to 100 hours when fully charged

MEDIA HANDLING

Input Paper Capacity:	Standard Tray: 550 sheets
	Optional second tray (550 sheets)
	Bypass Tray: 100 sheets
	Automatic Tray Switching Capability
Paper Size:	Minimum: 5" x 7"/127 x 176 mm
	Maximum: 8.5" x 14 "/216 x 356 mm
Paper Weight:	Standard Tray: 16-24 lbs/60-90 gsm
	Bypass Tray: 16-43 lbs/60-163 gsm
	Document Handler: 50 Sheets
	Output Tray Capacity: 250 Sheets
Media Types:	Paper, envelopes, labels, transparencies

EMAIL OPTION

- Scan to SMTP addresses
- Local user access and authentication
- Network access and authentication
- Guest mode access is available
- Network address list search via LDAP

ACCESSORIES

- Network Accessory Kit (M20)
- Second Paper Tray
- Cabinet Stand
- Foreign Device Interface

DEVICE INFORMATION

Device Memory:

C20	32 MB
M20	32 MB
M20 (with Network Accessory Kit)	64 MB
M20	160 MB
(with Network Authentification Kit and Secure Print)*	
M20i	80 MB
M20i	176 MB
(with Network Authentification Kit and Secure Print)	

* Network Accessory Kit required

Device Management:

- ControlCentre™ 5.0
- Centreware Internet Services
- Centreware Web
- Centreware DP
- Novell NDPS
- HP OpenView

PHYSICAL

Dimensions (WxDxH):	21.3" x 17.4" x 19.2" / 540 x 441 x 488 mm
	21.3" x 17.4" x 24.4" / 540 x 441 x 619 mm
	with 2nd Paper Tray
Weight:	58 lb / 26 kg, 67 lb / 30 kg
	with Second Paper Tray

ELECTRICAL

Power Switch:	yes
Power:	110/220 VAC, 50/60 Hz
Power Consumption:	Average: 400 watts
	Power Saver Mode: 35 watts

OPERATING ENVIRONMENT

Temperature:	Maximum Range 50° - 89.6°F/10° - 32°C
	Recommended Range 60.8° - 86°F/16° - 30°C
Humidity:	Maximum Range 20 - 80%
	Recommended Range 30 - 70%

SUPPLIES

Approximate Yield:

- This product ships with a toner capacity of approximately 4,000 pages based on 5% Area Coverage
- Replacement cartridge capacity is approximately 8,000 pages based on 5% Area Coverage
- Drum Cartridge capacity is approximately 20,000 pages based on 5% Area Coverage
- Declared yield values in accordance with ISO 19752

AGENCY APPROVALS

UL Safety; CSA Safety

Maximum Duty Cycle: up to 20,000

TOTAL SATISFACTION SERVICES™

TOTAL SATISFACTION SERVICES

Item Name	Description	US Item #	Canada Item #
1 Yr Service	Annual On-Site Service, Applicable After 1st 90 Days of Product Ownership	20SAP	20SAPC
2 Addl Yr Svc	Extended On-Site Service For Total Of 27 Months On-Site Service When Combined With Any 90 Day Warranty, Applicable During 1st 90 Days Of Product Ownership	20S3P	20S3PC
3 Addl Yr Svc	Extended On-Site Service For Total Of 39 Months On-Site Service When Combined With Any 90 Day Warranty, Applicable During 1st 90 Days Of Product Ownership	20S4P	20S4PC

ADDITIONAL INFORMATION SOURCES

The Front Panel

The Front Panel offers tools and information pages to help with machine set-up, feature selections, solve operational problems, media feed and supply issues.

The C20/M20/M20i Customer Documentation CD-ROM contains:

- MFP User's Guide

- Fax User's Guide

- Adobe® Acrobat® Reader 5.

- Print drivers

- TWAIN Scanning Driver

- Xerox ControlCentre® system setup and administration software

On the Web

Visit **www.xerox.com/office** for:

- Product, supplies, and support information

- Downloading drivers

- Finding your local reseller

- On-line documentation

Visit **www.xerox.com/office/support** for:

- Support and service information including the same troubleshooting knowledge base used by Xerox Customer

- Support staff to provide the latest technical information on:

    – Application issues

    – Errors

    – Print-quality issues

    – Troubleshooting

Questions?
Comments?
Problems?

If you have any questions or issues with your evaluation of this multifunction product, please contact your Xerox sales representative or the Xerox Office Help Desk at:

U.S. AND CANADA 1-877-362-6567

*Or visit us on the web at: **www.xerox.com/office***